Appendix E. Hydraulic-Property Database, Nevada Test Site and Vicinity, Nye County, Nevada.

Hydraulic-property data were compiled for both underground and surface sites located on and around the NTS. Appendix E data are available at URL: http://pubs.usgs.gov/ds/2007/297/.

Table E1. Description of Hydraulic-Property Database field contents.

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
SrtOrdUSGS	USGS NTS sort order	–	Emplacement and exploratory holes typically are displayed together. Many sites also have multiple completion intervals within the same hole. Therefore, a sort order number is assigned to all USGS sites associated with DOE and/or DOD projects in Nevada. This field is modified as new sites are added.	
UnqNoUSGS	USGS NTS unique number	–	Spatial (*X*-*Y*) coordinates are unavailable at some locations. Therefore, USGS site identification numbers cannot be established in the USGS NWIS database Sitefile for these sites. Because NWIS site identification numbers cannot be assigned to all sites, it is necessary to assign a unique site number to all USGS sites associated with USGS DOE/DOD projects in Nevada. Although the unique numbers were initially assigned in the same order as the USGS NTS sort order, new sites are assigned the next available sequential number.	
NTSArea	NTS area	–	NTS Administrative Area number (see fig. 1). Entries are listed in **bold** type where sites are located in areas other than the hole name implies. For example, USGS hole name **UE-10j** is actually located in NTS area **08**.	
HleNmeUSGS	USGS hole name	–	USGS hole name designation. Entries are listed in bold type where sites are located in areas other than the hole name implies.	
HleTstSeq	Hole test sequence number	–	Sequence of testing conducted at each specific borehole or drift, listed in ascending order by date and time.	
TstIntNo	Test interval number	–	Sequence of tested interval.	
TstIntSeq	Test interval sequence number	–	Sequence of tests, when multiple tests are reported within a test interval.	
TstIntTopft	Test interval top (ft)	–	Depth to top of tested interval; in feet below land surface for boreholes and shafts; in feet from portal opening for tunnels and drifts.	
TstIntBtmft	Test interval bottom (ft)	–	Depth to bottom of tested interval; in feet below land surface for boreholes and shafts; in feet from portal opening for tunnels and drifts.	
TstNo	Test number	–	Number or zone of test, as recorded on field sheets.	
TstTyp	Test type	–	Typical testing types are: bailing, injection, laboratory, pumping, and swabbing.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
TstPhs	Test phase	–	Phases of testing are: initializing, injection, pumping, recovery, suspended, and swabbing.	
TstRunNo	Test run number	–	Cumulative number of swabbing runs or trips in the borehole.	
TstDur	Test duration	–	Length of test; as hours, minutes, and seconds.	
TstRmk	Test remarks	–	Pertinent comments concerning test data.	
RtYldTst	Test rate or yield	–	Yield or rate of injection.	
RtYldUntTst	Test rate or yield units	–	The conversion factor [448.83117] is used to convert between gallons per minute (gpm) and cubic feet per second (cfs).	
RtYldRmkTst	Test rate or yield remarks	–	Pertinent comments concerning rate or yield data.	
RdgFlwmtr	Flowmeter reading	–	Totalizing flowmeter readings.	
UntFlwmtr	Flowmeter units	–	Normally gallons [(325,851 gallons = 1 acre-foot) and (gallons * 3.78533 = liters)].	
RmkFlwmtr	Flowmeter remarks	–	Pertinent comments concerning flowmeter data.	
RdgStfGg	Staff gauge reading	–	Depth to water in storage tank used for injection of water.	
UntStfGg	Staff gauge units	–	Normally feet [feet * 0.3048 = meters].	
RmkStfGg	Staff gauge remarks	–	Pertinent comments concerning staff gage data.	
QTst	Test quantity	–	Total quantity withdrawn from or injected into the borehole.	
QUntTst	Test quantity units	–	Normally gallons [(325,851 gallons = 1 acre-foot) and (gallons * 3.78533 = liters)].	
QRmkTst	Test quantity remarks	–	Pertinent comments concerning quantity data.	
CalcDtTm	Calculated date/time	–	Calculated from data contained in the following Date, Time, and Elapsed or cumulative time fields.	
Date	Date	–	Calendar date, as century, year, month, and day.	
Time	Time	–	Clock time (24-hour -or- military), as hour and minute.	
TmElapsCum	Elapsed or cumulative time	–	Elapsed or cumulative time, in minutes, since testing or recovery commenced.	
WLBlwMP	Depth to water below measuring point	–	Depth-to-water measurement, in feet or meters below the measuring point ["-----" indicates time listed but no water level recorded or other activity performed].	
WLUnt01	Depth to water units	–	Normally meters [meters / 0.3048 = feet].	
WLRmk01	Depth to water remarks	–	Pertinent comments concerning depth-to-water data.	
RdgAirlnGg	Airline gauge reading	–	Normally pounds per square inch.	
UntAirlnGg	Airline gauge units	–	Multiply psi * 2.31 to convert to feet of water.	
RmkAirlnGg	Airline gauge remarks	–	Pertinent comments concerning airline data.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
StatWLBlwMP	Static water level below measuring point	–	Static (undisturbed) water level.	
TstWLBlwMP	Testing water level below measuring point	–	Maximum water level during testing.	
WLUnt02	Water level units	–	Normally feet [feet * 0.3048 = meters].	
WLRmk02	Water level remarks	–	Pertinent comments concerning water-level data.	
Drawdown	Drawdown	–	Change in depth to water during testing.	
UntDrawdown	Drawdown units	–	Normally meters [meters / 0.3048 = feet].	
RmkDrawdown	Drawdown remarks	–	Pertinent comments concerning drawdown data.	
TypPacker	Packer type	–	Manufacturer or model name of straddle-packer tool.	
DiamPacker	Packer diameter	–	Uninflated diameter of packer unit.	
SpacePacker	Packer spacing	–	Distance between bottom of upper and top of lower packer.	
UntPacker	Packer units	–	Normally inches and feet [feet * 0.3048 = meters].	
RmkPacker	Packer remarks	–	Pertinent comments concerning straddle-packer data.	
TypPump	Pump type	–	Manufacturer or model name of pump.	
IntDthPump	Pump intake depth	–	Depth to pump intake.	
UntPump	Pump units	–	Normally feet [feet * 0.3048 = meters].	
RmkPump	Pump remarks	–	Pertinent comments concerning pump data.	
SizeStorTnk	Storage tank size	–	Dimensions of storage tank, as width × length × height.	
SizeUntStorTnk	Storage tank size units	–	Normally feet [feet * 0.3048 = meters].	
CapStorTnk	Storage tank capacity	–	Volume of water storage tank will hold.	
CapUntStorTnk	Storage tank capacity units	–	Normally gallons [(325,851 gallons = 1 acre-foot) and (gallons * 3.78533 = liters)].	
RmkStorTnk	Storage tank remarks	–	Pertinent comments concerning storage tank data.	
DthQLn	Discharge line depth	–	Depth to bottom of discharge line.	
DthUntQLn	Discharge line depth units	–	Normally feet [feet * 0.3048 = meters].	
SzQLn	Discharge line size	–	Inside diameter (if available) of discharge line.	
SzUntQLn	Discharge line size units	–	Normally inches [Divide by 12 and multiply by 0.3048 to obtain meters].	
RefQLn	Discharge line reference	–	Note whether diameter is expressed as inside or outside dimensions.	
CapQLn	Discharge line capacity	–	Volume of water discharge line will transmit.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
CapUntQLn	Discharge line capacity units	–	Normally listed as gallons per foot.	
RmkQLn	Discharge line remarks	–	Pertinent comments concerning discharge line data.	
SpecCap	Specific capacity	–	Yield per unit of drawdown.	
UntSpecCap	Specific capacity units	–	Normally expressed as gallons per minute per foot of drawdown.	
RmkSpecCap	Specific capacity remarks	–	Pertinent comments concerning specific capacity data.	
SatHydCond	Saturated hydraulic conductivity	–	Saturated hydraulic conductivity (water movement through saturated media).	
HydCondUnt	Hydraulic conductivity units	–	Reporting units.	
HydCondMth	Hydraulic conductivity method	–	Method used to measure hydraulic conductivity.	
HydCondRmk	Hydraulic conductivity remarks	–	Pertinent comments concerning hydraulic conductivity data.	
TWtr	Temperature water	–	Water temperature, as degrees.	
TIntlWtr	Temperature initial water	–	Initial (pre-testing) water temperature, as degrees.	
TMaxWtr	Temperature maximum water	–	Maximum water temperature, as degrees.	
TUnt	Temperature units	–	Normally Celsius [(Celsius * 1.8) + 32 = Fahrenheit].	
TRmk	Temperature remarks	–	Pertinent comments concerning temperature data.	
CondWtr	Conductivity water	–	Specific conductance (reciprocal of resistivity) of the water.	
CondUnt	Conductivity units	–	Reporting units are micromhos per centimeter [micromhos have been renamed to the numerically equivalent microsiemens].	
CondRmk	Conductivity remarks	–	Pertinent comments concerning specific conductance data.	
pHWtr	pH water	–	Hydrogen ion activity (concentration); expressed as the negative base-10 log of the hydrogen-ion activity, in moles per liter.	
pHRmk	pH remarks	–	Pertinent comments concerning pH data.	
MajProdZn	Major producing zone(s)	–	Depth(s) to top and bottom of major a major producing zone(s).	
LthMajProdZn	Major producing zone lithology	–	Lithologic description or stratigraphic unit adjacent to major producing zone(s).	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
UntMajProdZn	Major producing zone units	–	Normally feet [feet * 0.3048 = meters].	
RmkMajProdZn	Major producing zone remarks	–	Pertinent comments concerning major producing zone data.	
ElvRP29ft	Reference point elevation NGVD29 (ft)	–	Elevation of reference (measuring) point, in feet above mean sea level; National Geodetic Vertical Datum of 1929 (NGVD29).	
HeightRP	Reference point height	–	Height of reference (measuring) point, in feet above land surface.	
DscRP	Reference point description	–	Description of the reference (measuring) point.	
UntRP	Reference point units	–	Normally feet [feet * 0.3048 = meters].	
RmkRP	Reference point remarks	–	Pertinent comments concerning measuring point data.	
AnlyzAgy	Analyzing agency	–	Agency that performed the sample analyses.	
AnlyzAgy	Analyzing agency	Birdwell	Birdwell Division of Seismograph Service Corporation (SSC).	
AnlyzAgy	Analyzing agency	BN	Bechtel Nevada (BN).	
AnlyzAgy	Analyzing agency	CL	Core Laboratories, Inc. (CL), Bakersfield, California; Dallas, Texas.	
AnlyzAgy	Analyzing agency	DTRA	DOD, Defense Threat Reduction Agency (DTRA).	
AnlyzAgy	Analyzing agency	DRI	Desert Research Institute (DRI).	
AnlyzAgy	Analyzing agency	DS	Daniel B. Stephens and Associates, Inc. (DS), Albuquerque, NM.	
AnlyzAgy	Analyzing agency	F&S	Fenix and Scisson, Inc. (F&S).	
AnlyzAgy	Analyzing agency	FSN	Fenix and Scisson of Nevada (FSN).	
AnlyzAgy	Analyzing agency	H&N	Holmes and Narver, Inc. (H&N).	
AnlyzAgy	Analyzing agency	LANL	Los Alamos National Laboratory (LANL).	
AnlyzAgy	Analyzing agency	LLNL	Lawrence Livermore National Laboratory (LLNL).	
AnlyzAgy	Analyzing agency	NSTec	National Security Technologies, LLC (NSTec).	
AnlyzAgy	Analyzing agency	NTL	Nevada Testing Laboratories, LTD. (NTL).	
AnlyzAgy	Analyzing agency	PTL	Pittsburgh Testing Laboratory (PTL), Salt Lake City, Utah.	
AnlyzAgy	Analyzing agency	REECo	Reynolds Electrical and Engineering Company (REECo).	
AnlyzAgy	Analyzing agency	RSN	Raytheon Services Nevada (RSN).	
AnlyzAgy	Analyzing agency	SNL	Sandia National Laboratories (SNL).	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
AnlyzAgy	Analyzing agency	TT	Terra Tek, Inc. (TT), Salt Lake City, Utah, a Schlumberger company; sometimes referred to as TerraTek Research.	
AnlyzAgy	Analyzing agency	UI	University of Illinois (UI).	
AnlyzAgy	Analyzing agency	USACE	U.S. Army Corps of Engineers (USACE).	
AnlyzAgy	Analyzing agency	USGS	USGS.	
DatSrc	Data source	–	Agency that reported hydraulic-property data.	
DatSrc	Data source	BN	Bechtel Nevada (BN).	
DatSrc	Data source	DTRA	DOD, Defense Threat Reduction Agency (DTRA).	
DatSrc	Data source	DRI	Desert Research Institute (DRI).	
DatSrc	Data source	DS	Daniel B. Stephens and Associates, Inc. (DS), Albuquerque, NM.	
DatSrc	Data source	F&S	Fenix and Scisson, Inc. (F&S).	
DatSrc	Data source	FSN	Fenix and Scisson of Nevada (FSN).	
DatSrc	Data source	IT Corp.	International Technology Corporation (IT Corp., purchased by Shaw Group, Inc.).	
DatSrc	Data source	LANL	Los Alamos National Laboratory (LANL).	
DatSrc	Data source	LLNL	Lawrence Livermore National Laboratory (LLNL).	
DatSrc	Data source	NSTec	National Security Technologies, LLC (NSTec).	
DatSrc	Data source	RSN	Raytheon Services Nevada (RSN).	
DatSrc	Data source	SNJV	Stoller-Navarro Joint Venture (SNJV).	
DatSrc	Data source	USGS	USGS.	
RcdTypDsc	Record type or description	–	Record description and/or document type.	
RcdTypDsc	Record type or description	BN/PF	Bechtel Nevada (BN) Project Files (PF).	
RcdTypDsc	Record type or description	DTRA/PF	DOD, Defense Threat Reduction Agency (DTRA) Project Files (PF).	
RcdTypDsc	Record type or description	DRI/PF	Desert Research Institute (DRI) Project Files (PF).	
RcdTypDsc	Record type or description	DS/LR	Daniel B. Stephens and Associates, Inc. (DS) Laboratory Report (LR).	
RcdTypDsc	Record type or description	F&S/PF	Fenix and Scisson, Inc. (F&S) Project Files (PF).	
RcdTypDsc	Record type or description	FSN/PF	Fenix and Scisson of Nevada (FSN) Project Files (PF).	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

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Access field name	Excel field name	Field code	Field explanation	Field source
RcdTypDsc	Record type or description	IT Corp./PF	International Technology Corporation (IT Corp.) Project Files (PF).	
RcdTypDsc	Record type or description	LANL/PF	Los Alamos National Laboratory (LANL) Project Files (PF); referred to as "Blue Folders."	
RcdTypDsc	Record type or description	LLNL/PF	Lawrence Livermore National Laboratory (LLNL) Project Files (PF).	
RcdTypDsc	Record type or description	NSTec/PF	National Security Technologies, LLC. (NSTec) Project Files (PF).	
RcdTypDsc	Record type or description	RSN/PF	Raytheon Services Nevada (RSN) Project Files (PF).	
RcdTypDsc	Record type or description	SNJV/PF	Stoller-Navarro Joint Venture (SNJV) Project Files (PF).	
RcdTypDsc	Record type or description	USGS/PF	USGS Project Files (PF).	
RptRef	Report reference	–	Published report that contains hydraulic-property data. A complete list of acronyms and abbreviations used in USGS and other reports is included in the usgs_rpt and nts_acr_abv worksheets in the nts_hyd_pty spreadsheet (appendix E). **NOTE: [USGS Technical Letters are considered internal correspondence and are not available for public release unless the report has been assigned a USGS Open-File Report number. Technical Letters prepared under the USGS Hydrologic Resource Management Program (HRMP, formerly Hydrology/Radionuclide Migration Program) and assigned "blanket open-file status" are designated "USGS-474-number." Technical Letters prepared under the USGS Yucca Mountain Program (YMP) and assigned "blanket open-file status" are designated "USGS-1543-number." Furthermore, some reports prepared by the National Laboratories and the various DOE and DOD subcontractors may also be considered internal correspondence and not available for public release. Users interested in these reports must check with the source agency to determine availability].**	
Invst	Investigators	–	Authors and/or investigators.	
RecLoc	Record location	–	Physical location of hydraulic-property record.	
HleTyp	Hole type	–	Type of vertical or horizontal drilling or excavation.	
HleTyp	Hole type	Borehole	Vertical surface location; includes wells and vertical test holes.	
HleTyp	Hole type	Crater	Vertical surface location.	
HleTyp	Hole type	Drift	Horizontal underground location; includes tunnels and horizontal test holes.	
HleTyp	Hole type	Multiple Wells	Multiple wells.	
HleTyp	Hole type	Outcrop	Surface location.	
HleTyp	Hole type	Shaft	Vertical surface location.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
HleTyp	Hole type	Spring	Spring.	
HleTyp	Hole type	Streambed	Streambed.	
HleTyp	Hole type	Surface	Surface location.	
HleTyp	Hole type	Trench	Horizontal surface location.	
HleTyp	Hole type	Unknown	Hole type not known.	
TnlDftConSta	Tunnel or drift construction station	–	Construction station at collar location (portal opening), for tunnels and drifts (i.e. - 9+17 is 917 ft; 10+72,195' is a 195 ft hole at the 1,072 ft station; etc.).	
ConStaRmk	Construction station remarks	–	Remarks concerning the portal opening (collar location), for tunnels and drifts (i.e. - In U-12e.14 main drift; Alcove; Face; Invert; Lft Rib; Rt Rib; etc.).	
NVSPE27	Nevada SPCS Easting NAD27	–	Nevada state plane coordinates (SPCS), Easting, central zone, in feet; North American Datum of 1927 (NAD27).	
NVSPN27	Nevada SPCS Northing NAD27	–	Nevada state plane coordinates (SPCS), Northing, central zone, in feet; North American Datum of 1927 (NAD27).	
NVSPErr	SPCS error	–	SPCS error, in feet. Blank if unknown.	
AltPorOpn29ft	Altitude at portal opening NGVD29 (ft)	–	Altitude at the collar location of the portal opening, for tunnels and drifts; in feet above mean sea level; National Geodetic Vertical Datum of 1929 (NGVD29).	
BngPorOpnDeg	Bearing from portal opening (degrees)	–	Bearing from the portal opening, for tunnels and drifts; in degrees, minutes, and seconds or decimal degrees (i.e. - S0720958W is South, 72 degrees, 9 minutes, 58 seconds West; N0325529E is North, 32 degrees, 55 minutes, 29 seconds East; N052.75W is North 52 and three-quarter degrees West; etc.)	
IncPorOpnDeg	Inclination from portal opening (degrees)	–	Inclination from the portal opening, for tunnels and drifts; in degrees, minutes, and seconds or decimal degrees (i.e. - 0045825 is a hole 4 degrees, 58 minutes, 25 seconds above horizontal; 2700000 is a vertical hole below horizontal; 0900000 is a vertical hole above horizontal; 0000000 and 1800000 are horizontal holes; 0150000 and 1650000 are holes 15 degrees up (above horizontal); 3150000 and 2250000 are holes 45 degrees down (below horizontal); 356.5 is a hole 3 and one-half degrees below horizontal; 170.25 is 9 and three-quarter degrees above horizontal; etc.). Inclinations are linked to bearings, so values near horizontal for holes bearing north or east would be added to zero for holes inclined above horizontal and subtracted from 360 for holes below horizontal; conversely, values near horizontal for holes bearing south or west would be subtracted from 180 for holes inclined above horizontal and added to 180 for holes below horizontal.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
AltLndSur29ft	Altitude of land surface NGVD29 (ft)	–	Altitude of land surface within a reasonable proximity of the site; in feet above mean sea level; National Geodetic Vertical Datum of 1929 (NGVD29). This is an average of the surrounding ground-surface elevation. If the original surface has been altered, estimate the altitude based on nearby unaltered terrain.	
AltMth	Altitude method	–	Method used to determine altitude of land surface.	
AltMth	Altitude method	A	Altimeter.	
AltMth	Altitude method	D	Differentially corrected Global Positioning System (DGPS).	
AltMth	Altitude method	G	Global Positioning System (GPS).	
AltMth	Altitude method	I	Interferometric Synthetic Aperture Radar (IfSAR), airplane.	
AltMth	Altitude method	J	Light Detection And Ranging (LiDAR), airplane.	
AltMth	Altitude method	L	Level or other surveying method.	
AltMth	Altitude method	M	Interpolated from topographic map [report accuracy as ± one-half the contour interval (or supplementary contour interval) specified on the quadrangle].	
AltMth	Altitude method	N	Interpolated from digital elevation model (DEM).	
AltMth	Altitude method	R	Reported.	
AltMth	Altitude method	U	Unknown.	
AltAcc	Altitude accuracy	–	Altitude accuracy; in feet (decimal values for accuracies less than 1 ft).	
AltAcc	Altitude accuracy	U	Unknown.	
SitCmpDt	Site completion date	–	Date hole construction completed.	
HleDthft	Hole depth (ft)	–	Hole depth; in feet below land surface for boreholes and shafts; in feet from portal opening for tunnels and drifts.	
RedBkHleNo	Redbook hole number	–	Redbook hole numbers are currently assigned to new holes completed at the NTS by National Security Technologies, LLC (NSTec). Entries are listed in **bold** type where sites are located in areas other than the hole name implies.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
RedBkHleNo	Redbook hole number	–	Redbook hole numbers listed in the Raytheon Services Nevada (RSN) Nevada Test Site Drilling and Mining Summary (last updated 12-31-90) and previously in the Fenix and Scisson of Nevada NTS Drilling and Mining Summary (last updated 06-30-89; formerly Fenix and Scisson, Inc.) were assigned according to the type of hole drilled or mined, site location (NTS area), and sequence code for the consecutive order in which the hole was drilled, mined, or recompleted. Emplacement holes for nuclear weapons tests begin with the letter U, followed by a dash (-), NTS area number (fig. 1), and sequence code (letters a-z, aa-az, ba-bz, …, za-zz). Exploratory holes follow the same naming convention as emplacement holes, but begin with the letters UE. Holes that begin with the letter U but were drilled or mined specifically to provide data that could not be collected from an emplacement hole follow the emplacement hole naming convention, but are assigned incremental letters or numbers, or both following the sequence code. The suffix letters indicate: [#, satellite hole; CH, cable hole; Ex. or Expl., exploratory hole; HTH, hydrologic test hole; Inst., instrument hole; ITS, integrated test system; PPS, pre-postshot hole; PS, post-shot hole; RNM, radionuclide migration hole; RWMS, radioactive waste management site; and S, substitute hole]. There are numerous exceptions to the standard naming convention. The prefix letters indicate: [HTH, hydrologic test hole; J, Jackass Flat; and RNM, radionuclide migration]. Numbers and letters following the dash in the exceptions represent sequence of site drilling or mining, not NTS location. Hole type also is commonly listed after the hole designation. For example: [Access Shaft; Cable Hole; Expl. Hole; Instrument; LOS (Line Of Sight) Drift; Sidetrack; Reentry Mining; Tunnel; Vent Hole; and Zero Station].	
RedBkHleNo	Redbook hole number	–	USGS DOE project-related holes in Central Nevada follow a similar naming convention. However emplacement holes begin with the letters UC and exploratory holes begin with the letters UCE.	
RedBkHleNo	Redbook hole number	–	USGS Yucca Mountain Project (YMP) holes at the NTS follow the exploratory hole naming convention. Offsite YMP holes begin with the letters USW to indicate underground southern Nevada waste. The suffix letters indicate: [G, geologic hole; GA, geologic angle hole; GU, geologic unsaturated zone hole; H, hydrologic hole; MX, missile-experimental hole (drilled for U.S. Air Force [USAF] MX Missile-Siting Investigation); N, neutron hole; p, Paleozoic or pre-Tertiary hole; RF, repository facility hole; UZ, unsaturated zone hole; V, volcanic hole; VSE, vertical shelter exploratory hole (drilled for USAF MX Missile-Siting Investigation); and WT, water table hole].	
RedBkHleNo	Redbook hole number	–	Environmental Restoration Program (ERP) holes at the NTS begin with the letters ER, followed by a dash, NTS area number (fig. 1), a dash, and an incremental sequence number. The NTS area number is replaced by suffix letters for ERP holes located offsite. The suffix letters indicate: [EC, area at the USAF Nellis Air Force Base Range (NAFBR) where the holes were drilled; and OV, Oasis Valley].	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
RedBkHleNo	Redbook hole number	–	LLNL Containment Program Data Base hole names are 10 characters in length. The first character identifies the site location of the hole: [U, Nevada Test Site; C, Central Nevada Test Site; A, Amchitka Test Site; and O, offsite hole]. The second and third characters identify either the right-justified Area number for an NTS hole, or the two-letter state abbreviation (U.S. Postal Service abbreviation) for an offsite hole: [U 2, NTS hole in Area 2; U20, NTS hole in Area 20; and ONV, offsite hole in Nevada]. The fourth character is reserved for specially defined areas at the NTS: [U 9I, NTS hole in Area 9, in the ITS area]. Characters 5-10 identify the hole complex or group of holes (of different types) related to the emplacement hole. This may include letters or numbers. For an NTS hole, the fifth and sixth characters are alphabetical descriptors and usually complete the common hole name for an emplacement hole: [U 2 c, NTS hole in Area 2; U 2 ca, NTS hole in Area 2, drilled after U 2 c; and U 2 cb, NTS hole in Area 2, drilled after U 2 ca]. For offsite holes, these characters will indicate county name, on a limited space basis: [ONV NYE, offsite hole in Nevada, Nye County; and OCO RBL, offsite hole in Colorado, Rio Blanco County]. These characters may also indicate project identifiers: [U 1 RNM, NTS hole in Area 1, Radionuclide Migration Program; and U 12 ER, NTS hole in Area 12, Environmental Restoration Program]. LLNL Containment Program Data Base hole types are: [A, access; B, rad chem; C, core; D, Waterways experiment Station (WES); E, exploratory; F, tunnel; G, auger, crack investigation; H, emplacement (H A or H B is a centerpunch emplacement hole); I, instrument; J, PINEX or LOS; K, escape; L, cable; M, hydrologic test hole; N, tracer and sample, foil recovery; O, tunnel dynamics; P, post test; Q, seismic, high explosive; R, re-entry (R-S is a reentry shaft); S, shaft (W/S is a whipstock hole); T, test hole (many types); U, post-test hole, in crater; V, vent; W, water supply; X, pre-post test; Y, abandoned; Z, waste storage; 1, rack assembly; 2, dump; 3, oil well; 4, gas well; 5, geothermal well; and ?, unknown hole type]. Multiple uses of a hole are indicated by consecutively adding hole type abbreviations in this field. If the hole is closely associated with another hole, or if it also is known by another name, this is indicated by /____. For example, the hole name: [U 2 bt HE/U2BU H] means that U 2 bt was initially an emplacement hole that became an exploratory hole. U 2 bt also is an exploratory hole for the nearby emplacement hole U 2 bu.	
FmrOthHleNme	Former or other hole name	–	Former or other names utilized for holes.	
AgyCdUSGSNWIS	NWIS agency code	USGS	USGS NWIS code to indicate the reporting agency. All sites currently populated in the hydraulic-property database are assigned as USGS.	
SitIDNoUSGSNWIS	NWIS site identification number	–	USGS NWIS site identification number.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
SitIDNoUSGSNWIS	NWIS site identification number	–	Downstream order numbers are assigned for surface-water, on-stream, sites. The first two digits of the station number indicate the part or major drainage system formerly used for USGS Water-Supply Papers entitled “Surface Water Supply of the United States” and the remaining digits indicate the downstream order within the part. This site number is left-justified. Although downstream identification numbers have been converted to a variable length format, with up to 14 digits available, 8 digits are normally assigned.	
SitIDNoUSGSNWIS	NWIS site identification number	–	Numbering system for sites on open water bodies, off-channel sites, wells, springs, etc., is based on the grid system of latitude and longitude. Although this number is initially determined from the best known latitude/longitude location, plus a 2-digit sequence number for the number of sites located at those coordinates, it retains no locational relevance once the site is created in the database. The overall designation consists of 15 digits. The values of latitude and longitude are updated as better coordinates become available, and should always be used for locating sites or plotting locations.	
Lat27	Latitude NAD27	–	Latitude; in degrees, minutes, and seconds [two digits are available for decimal seconds]; North American Datum of 1927 (NAD27).	
Lng27	Longitude NAD27	–	Longitude; in degrees, minutes, and seconds [two digits are available for decimal seconds]; North American Datum of 1927 (NAD27).	
LocMth	Location method	–	Method used to determine latitude and longitude coordinates.	
LocMth	Location method	C	Calculated from land net.	
LocMth	Location method	D	Differentially corrected Global Positioning System (DGPS).	
LocMth	Location method	G	Global positioning system (GPS), uncorrected [Standard Positioning Service (SPS) and Precise Positioning Service (PPS)].	
LocMth	Location method	L	Long-range navigation (Loran) system.	
LocMth	Location method	M	Interpolated from map.	
LocMth	Location method	N	Interpolated from digital map.	
LocMth	Location method	R	Reported.	
LocMth	Location method	S	Transit, theodolite, or other surveying method.	
LocMth	Location method	U	Unknown.	
LocAcc	Location accuracy	–	Accuracy of latitude and longitude coordinates.	
LocAcc	Location accuracy	H	Hundredth second.	
LocAcc	Location accuracy	1	Tenth second.	
LocAcc	Location accuracy	5	Half second.	
LocAcc	Location accuracy	S	Second.	
LocAcc	Location accuracy	R	Three seconds.	

Table E1. Description of Hydraulic-Property Database field contents.—Continued

[Access field names longer than 8 characters indicated by red text because longer names may be incompatible with some database and Graphic Information System (GIS) applications. Blank field source indicates not applicable, not available online, or not accessible to the public. **Abbreviations:** DOD, U.S. Department of Defense; DOE, U.S. Department of Energy; NTS, Nevada Test Site; NWIS, National Water Information System; USGS, U.S. Geological Survey; ft, foot; –, not applicable]

Access field name	Excel field name	Field code	Field explanation	Field source
LocAcc	Location accuracy	F	Five seconds.	
LocAcc	Location accuracy	T	Ten seconds.	
LocAcc	Location accuracy	M	Minute.	
LocAcc	Location accuracy	U	Unknown.	
DecLat83	Decimal latitude NAD83	–	Latitude, in decimal degrees [automatically generated by the NWIS system software]; North American Datum of 1983 (NAD83).	
DecLng83	Decimal longitude NAD83	–	Longitude, in decimal degrees [automatically generated by NWIS system software]; North American Datum of 1983 (NAD83).	
UTME27m	UTM Easting NAD27 (meters)	–	Universal Transverse Mercator coordinates, Easting, zone 11, in meters; North American Datum of 1927 (NAD27).	
UTMN27m	UTM Northing NAD27 (meters)	–	Universal Transverse Mercator coordinates, Northing, zone 11, in meters; North American Datum of 1927 (NAD27).	
UTMErr	UTM error	–	UTM error, in meters. Blank if unknown.	
Rmk	Remarks	–	Pertinent remarks pertaining to the hydraulic properties.	
DtRcdLstUpd	Date record last updated	–	Date of data entry (compiled into electronic format) is listed if a row of record has not been modified. The date of last (most recent) update is listed if a row of record has been modified. This date does not indicate which columns of data have been modified; only that records have been updated within a particular row. Dates are listed as yyyymmdd (4-digit year; 2-digit month; 2-digit day).	
URLAdr	URL address	–	Link to online website and database.	

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